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## 1993 W.O. Atwater Centennial Memorial Lecture

## The Life and Times of W.O. Atwater (1844-1907)

By Dr. Kenneth J. Carpenter

6:15 p.m., June 3, 1993 Auditorium, Renaissance Hotel Tech World Washington, D.C.

sponsored by The Agricultural Research Service



In addition to being renowned as a pioneer in the field of nutrient bioavailability, **Kenneth J. Carpenter** is a distinguished scholar of the history of nutrition with a particular interest in the work of W.O. Atwater and the pioneer generation of nutritional scientists.

Dr. Carpenter earned his Ph.D. at Sidney Sussex College, Cambridge, England, in 1948. He received a Kellogg Fellowship, which he used to work at the Harvard School of Public Health, and a Royal Society Fellowship to work at the Central Food Technological Research Institute in India.

He is recognized internationally for his systematic work on the effects of processing on the chemistry and biological value of the protein in foods. The analytical method that he developed for measuring the available lysine content of foods has been used in many parts of the world. Agencies of the United Nations have used it for the evaluation of protein supplements for children, and industrial laboratories for the evaluation of oilseed products used for animal feeding.

Dr. Carpenter is known also for his studies of the foods and diets that have been associated with the disease pellagra, and the finding that amongst traditional corn-eating communities, their methods of preparing the corn by treatment with alkali helped to protect them from the disease. He has also demonstrated the value of the Hopi Indian practice of preserving roasted immature corn. He and his colleagues have been their own subjects in some of these studies.

His interest in the history of nutrition began with the production of a book on pellagra for the Benchmark Series, and is now far-ranging. His 1986 book, *The History of Vitamin C and Scurvy*, analyzed the patterns of scientific thought about disease and food in different periods. His next volume, *Protein and Energy: a Study of Changing Ideas in Nutrition*, will be published in 1994.

Dr. Carpenter, after many years as part of the faculty of the University of Cambridge, served as Professor of Experimental Nutrition at the University of California at Berkeley from 1977 to 1991, including three years as Department Chairman. He received the Sc.D. degree, which is awarded by Cambridge University for a distinguished record of research in 1974, and has been named a Fellow of the American Institute of Nutrition.

The W.O. Atwater Memorial Lectureship was established in 1968 by the Agricultural Research Service to honor the memory of a great scientist and to recognize scientists who have made unique contributions toward improving the diets of people around the globe.

Wilbur Olin Atwater (1844-1907) was the foremost pioneer in nutrition research and education in the United States, and he was USDA's first chief of nutrition investigations. He is generally considered the father of modern human nutrition in this country because of his early research on nutrients, proteins, and food composition.

The U.S. Department of Agriculture is celebrating the official centennial commemorating the life and accomplishments of Dr. Atwater, a leader in human nutrition requirements, food composition, food consumption patterns, nutrition education, and the nutritional needs of the poor. These areas remain the focus of human nutrition within USDA today.

The Agricultural Research Service, the principal scientific research agency in the U.S. Department of Agriculture, helps provide knowledge and technology for the benefit of American farmers and consumers. The research includes promoting optimum human health and well-being through improved nutrition and family resource management.



## **Previous Lecturers**

1992, James A. Olson, Professor of Biochemistry and Biophysics, Iowa State University, before the American Institute of Nutrition 1991, R. Gaurth Hansen, Distinguished Provost Emeritus and Distinguised Professor Emeritus of Nutrition and Food Sciences and Biochemistry, Utah State University, before the Institute of Food Technologists

1990, Alfred E. Harper, E.V. McCollum Professor of Nutrition, University of Wisconsin, before the American Institute of Nutrition at the annual meeting of the Federation of American Societies for Experimental Biology

1989, Helen A. Guthrie, Professor and Head, Nutrition Department, The Pennsylvania State University, before the Society for Nutrition Education

1988, John E. Kinsella, Liberty Hyde Bailey Professor of Food Chemistry and General Foods Distinguished Professor of Food Science, Cornell University, before the Institute of Food Technologists 1987, Malden C. Nesheim, Director, Division of Nutrition, Cornell University, before the American Institute of Nutrition at the annual meeting of the Federation of American Societies for Experimental Biology

1986, Elsie Widdowson, Department of Medicine, Addenbrooke's Hospital, Cambridge, England, before the Joint Meeting of the American Institute of Nutrition, American Society of Clinical Nutrition, and Canadian Society of Nutrition Science

1985, Mark Hegsted, Professor of Nutrition, New England Regional Primate Research Center, before the American Institute of Nutrition 1984, Harold H. Sandstead, Director, North Atlantic Area, Human Nutrition Research Center on Aging at Tufts University, before the American Dietetic Association

1983, George H. Beaton, Professor of Nutrition Science, Faculty of Medicine, University of Toronto, before the Western Hemisphere Nutrition Congress

1982, Edwin M. Foster, Director, Food Research Institute, University of Wisconsin, before the Institute of Food Technologists 1981, Joaquin Cravioto, Professor of Pediatrics and Scientific Director, National Institute for Children's Health Sciences and Technology, Mexico City, before the International Congress of Nutrition 1980, Ancel Keys, Professor, Division of Epidemiology, University of Minnesota, before the Western Hemisphere Nutrition Congress 1979, Hector F. DeLuca, Professor, Department of Biochemistry, University of Wisconsin, before the American Institute of Nutrition 1978, Robert E. Olson, Professor, Department of Biochemistry, St. Louis University, before the American College of Physicians 1977, Nevin S. Scrimshaw, Institute Professor and Head of the Department of Nutrition and Food Science, Massachusetts Institute of Technology, before the Western Hemisphere Nutrition Congress 1976, Emil M. Mrak, Chancellor Emeritus, University of California at Davis, before the American Chemical Society 1975, William J. Darby, President, The Nutrition Foundation, Inc., before the American Dietetic Association 1974, J. George Harrar, President Emeritus, Rockefeller Foundation, before the American Association for the Advancement of Science 1973, Marina v.N. Whitman, Professor of Economics, University of Pittsburgh, before The American Home Economics Association 1971, Jean Mayer, Professor of Nutrition and Lecturer on the History of Public Health, Harvard University, before the National Biological Congress

1970, Philip Handler, President, National Academy of Sciences, and Chairman of the National Research Council, before the International

1969, Albert Szent-Gyorgyi, Director, Institute for Muscle Research, Marine Biological Laboratory, Woods Hole, Massachusetts, before the

1968, Artturi I. Virtanen, Director, Biochemical Research Institute, Helsinki, Finland, before the Federation of American Societies for

Congress of Food Science and Technology

American Chemical Society

**Experimental Biology** 

